

**Abstract**

A novel architecture for displaying images with multiple display devices uses only a single video display controller and single frame buffer regardless of how many display devices are included. The architecture can use a Time Division Multiplex Image Display (TDMID) algorithm for controlling the timing and data flow of the video display controller. The TDMID algorithm provides a simple way to send a divided image to different display devices by sharing line buffers, and thus eliminates the need for additional components as more display devices are added to a system. The novel architecture reduces overall system cost without sacrificing performance.